

## ABSTRACT

To treat epilepsy or schizophrenia by transplanting precursor cells of GABAergic neurons into a region where GABAergic neurons are lost or decreased in the brain of a patient suffering from the disease, it is intended to provide a method for separating a precursor cell of GABAergic neuron in an adult or a fetal nerve tissue or a precursor cell of GABAergic neuron derived from an embryo stem cell. The invention of this application comprises the step of preparing a cell population containing a precursor cell of GABAergic neuron, the step of introducing a DNA, in which a reporter gene emitting fluorescence detectable even in vivo is attached to the downstream of a promoter of GAD67 gene or GAD65 gene that is gene of an inhibitory neurotransmitter GABA synthase, into dispersed cells, the step of isolating a GABAergic neuron and a precursor cell of GABAergic neuron based on the presence/ absence of the fluorescence from the reporter protein, and the step of isolating the precursor cell of GABAergic neuron based on the possession of proliferative capability.